In the Claims:

Please cancel claims 3 and 10 without prejudice.

Please amend claims 1 and 9, and add new claims 22-27, such that the pending claims will read as follows:

Claim 1 (currently amended): A method of vaporizing a processing liquid, comprising:

providing an injection valve having:

a vaporization region;

a processing liquid inlet coupled to the vaporization region;

a carrier gas inlet coupled to the vaporization region;

an outlet coupled to the vaporization region and adapted to outlet a mixture of carrier gas and vaporized processing liquid; and

a wave generator operatively coupled to the vaporization region so as to vibrate the vaporization region;

flowing pressurized processing liquid into the vaporization region of the injection valve;

vaporizing the processing liquid within the vaporization region of the injection valve via a pressure drop within the vaporization region; and

vibrating the vaporization region.

Claim 2 (original): The method of claim 1 wherein flowing processing liquid into the vaporization region and vibrating the vaporization region occur simultaneously.

Claim 3 (canceled)

Claim 4 (original): The method of claim 1 wherein vibrating the vaporization region comprises employing the wave generator to apply a voltage wave to a piezoelectric which controls flow of the processing liquid into the vaporization region.

Claim 5 (original): The method of claim 1 wherein vibrating the vaporization region comprises vibrating an injection block through which the processing liquid, the carrier gas and the vaporized processing liquid and carrier gas mixture flow.

Claim 6 (original): The method of claim 1 further comprising;

dislodging residue from the vaporization region via the vibration.

Claim 7 (original): The method of claim 6 further comprising trapping residue in a gas line coupled between the injection valve and a semiconductor wafer processing chamber.

Claim 8 (original): A method of maintaining a semiconductor wafer processing system comprising:

performing the method of claim 6 on the injection valve when the injection valve is part of the semiconductor wafer processing system; and

thereafter, performing a cleaning process within a semiconductor wafer processing chamber operatively coupled to the injection valve.

Claim 9 (currently amended): A method of vaporizing a processing liquid, comprising:

flowing pressurized processing liquid into a vaporization region of an injection valve;

vaporizing the processing liquid within the vaporization region of the injection valve via a pressure drop within the vaporization region; and

simultaneously vibrating the vaporization region.

Claim 10 (canceled)

Claim 11 (original): The method of claim 9 wherein vibrating the vaporization region comprises applying a voltage wave to a piezoelectric which controls flow of the processing liquid into the vaporization region.

Claim 12 (original): The method of claim 9 wherein vibrating the vaporization region comprises vibrating an injection block through which the processing liquid, the carrier gas and the vaporized processing liquid and carrier gas mixture flow.

Claim 13 (original): The method of claim 9 further comprising;

dislodging residue from the vaporization region via the vibration.

Claim 14 (original): The method of claim 13 further comprising trapping residue in a gas line coupled between the injection valve and a semiconductor wafer processing chamber.

Claim 15 (original): A method of maintaining a semiconductor wafer processing system comprising:

performing the method of claim 13 on an injection valve which is part of a semiconductor wafer processing system; and

thereafter, performing a cleaning process within a semiconductor wafer processing chamber operatively coupled to the injection valve.

Claim 16 (original): A method of vaporizing a processing liquid, comprising:

providing an injection valve having:

a vaporization region;

a processing liquid inlet coupled to the vaporization region;

a flexible plate that defines the vaporization region and which is used to close the processing liquid inlet;

a piezoelectric operatively coupled to the flexible plate;

a carrier gas inlet coupled to the vaporization region;

an outlet coupled to the vaporization region for outletting a mixture of carrier gas and vaporized processing liquid; and

a wave generator operatively coupled to the piezoelectric wherein the wave generator is adjustable so as to open the processing liquid inlet, close the processing liquid inlet and vibrate the vaporization region via a voltage signal output to the piezoelectric;

flowing processing liquid into the vaporization region of the injection valve; and

vibrating the vaporization region.

Claim 17 (original): A method of vaporizing a processing liquid, comprising:

providing an injection valve having:

a plate that defines a vaporization region;

a piezoelectric coupled to the plate;

a processing liquid inlet coupled to the vaporization region;

a carrier gas inlet coupled to the vaporization region;

an outlet coupled to the vaporization region and adapted to output a mixture of carrier gas and vaporized processing liquid; and

a wave generator coupled to the piezoelectric wherein the wave generator is adjustable so as to open the processing liquid inlet, close the processing liquid inlet and vibrate the vaporization region via a voltage signal output to the piezoelectric;

flowing processing liquid into the vaporization region of the injection valve; and

vibrating the vaporization region.

Claim 18 (original): The method of claim 17 further comprising directing the wave generator to output a voltage signal of zero volts to open the processing liquid inlet.

Claim 19 (original): The method of claim 17 further comprising directing the wave generator to output a voltage

signal having a sonic frequency to vibrate the vaporization region.

Claim 20 (original): The method of claim 17 further comprising directing the wave generator to output a D.C. voltage signal to close the processing liquid inlet.

Claim 21 (original): The method of claim 20 further comprising directing the wave generator to output a voltage signal having both a D.C. voltage to close the processing liquid inlet and a sonic frequency to vibrate the vaporization region.

Claim 22 (new): A method of vaporizing a processing liquid, comprising:

providing an injection valve having:

a vaporization region;

a processing liquid inlet coupled to the vaporization region;

a carrier gas inlet coupled to the vaporization region;

an outlet coupled to the vaporization region and adapted to outlet a mixture of carrier gas and vaporized processing liquid; and

a wave generator operatively coupled to the vaporization region so as to vibrate the vaporization region;

flowing processing liquid into the vaporization region of the injection valve; and

vibrating the vaporization region.

Claim 23 (new): The method of claim 1, wherein:

providing an injection valve further comprises providing an injection valve having:

a restrictive orifice coupled between the processing liquid inlet and the vaporization region;

flowing pressurized processing liquid into the vaporization region of the injection valve comprises:

flowing pressurized processing liquid through the restrictive orifice and into the vaporization region of the injection valve; and

vaporizing the processing liquid within the vaporization region of the injection valve via a pressure drop within the vaporization region comprises:

causing a pressure drop in the processing liquid within the vaporization region by flowing the pressurized processing liquid through the restrictive orifice, and

vaporizing the processing liquid within the vaporization region of the injection valve via the pressure drop within the vaporization region.

Claim 24 (new): The method of claim 9, wherein:

flowing pressurized processing liquid into a vaporization region of an injection valve comprises:

flowing pressurized processing liquid through a restrictive orifice and into a vaporization region of an injection valve; and

vaporizing the processing liquid within the vaporization region of the injection valve via a pressure drop within the vaporization region comprises:

causing a pressure drop in the processing liquid within the vaporization region by flowing the

pressurized processing liquid through the restrictive orifice, and

vaporizing the processing liquid within the vaporization region of the injection valve via the pressure drop within the vaporization region.

Claim 25 (new): The method of claim 16, wherein:

providing an injection valve further comprises providing an injection valve having:

a restrictive orifice coupled between the processing liquid inlet and the vaporization region; and

flowing pressurized processing liquid into the vaporization region of the injection valve comprises:

flowing pressurized processing liquid through the restrictive orifice and into the vaporization region of the injection valve.

Claim 26 (new): The method of claim 17, wherein:

providing an injection valve further comprises providing an injection valve having:

a restrictive orifice coupled between the processing liquid inlet and the vaporization region; and

flowing pressurized processing liquid into the vaporization region of the injection valve comprises:

flowing pressurized processing liquid through the restrictive orifice and into the vaporization region of the injection valve.

Claim 27 (new): The method of claim 22, wherein:

providing an injection valve further comprises providing an injection valve having:

a restrictive orifice coupled between the processing liquid inlet and the vaporization region; and

flowing processing liquid into the vaporization region of the injection valve comprises:

flowing pressurized processing liquid through the restrictive orifice and into the vaporization region of the injection valve.